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KARLS, SHAY LYNN

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-3, 7-8, 15, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beeson (USPN 5589865) in view of Gelardi et al. (USPN 5457843).**

Beeson teaches a cleaning sheet comprising a substrate sheet (32) with a first and second surface (upper and lower surfaces) and a width and length (claims 1 and 2). The length is greater than the width (figure 6) (claim 1). The first surface of the sheet comprises a first (36) and second strip (34) of material (claim 1). The first and second strips have a first strip height (figure 3) and are orientated perpendicular to the feed path of the apparatus (col. 5, lines 56-58; states that the strips could be parallel to the page width). The first and second strips of material will compress when drawn through a roller since they are both made from compliant materials (col. 5, lines 7-23) (claim 1). The first strip is separated from the second strip by a first distance

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(figure 2) (claim 1). The height of the strips is relatively large compared to the substrate thickness (figure 3) (claim 1). The strip height is more than double the height of the substrate (figure 3) (claim 8). The first strip of material comprises open cell foam (first strip 36 is made from an absorbent material which is inherently an open cell material) (claim 3). The substrate sheet has a leading edge handle (edge closest to 38 is considered the handle; any portion that can be gripped by a users hand can be considered a handle) (claim 7). The substrate sheet has approximately the planar dimensions of a letter-sized sheet of paper (col. 4, lines 65-67) (claim 8). At least one of the first and second strips have the shape of a rectangular prism (figure 3) (claim 15). The first strip has a width that is relatively narrow compared to the first distance (figure 4 and 6 shows that the first strip is narrower than the distance between the first and second strip) (claim 21).

Beeson teaches all the essential elements of the claimed invention however fails to teach that the first and second strips of material extend across the entire width of the substrate (claim 1). Beeson states that the strips (34, 36) substantially span the entire width of the substrate (20) (col. 5, lines 1-3). Gelardi teaches a substrate with a length and a width (figure 7). There are strips of material (31) that are positioned widthwise across the entire substrate. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Beeson's strips that substantially span the entire width with strips that fully span the entire width as suggested by Gelardi.

Beeson also fails to teach that the strips have the shape of a triangular prism (claim 18). Beeson's strips are rectangular in shape. It is well known to use triangular prisms to clean surfaces. For example, Gelardi teaches a cleaning sheet comprising triangular prisms (figure 1, 4

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and 5) located on the top surface. It would have been obvious to at the time the invention was made to use a triangular prism as the shape of the cleaning strip on Beeson as taught by Gelardi since it is considered well known and further exemplified by Gelardi as a means for cleaning. Additionally, one of skill in the art would have expected Applicant's invention to perform equally well with either the rectangular or the triangular shape because both shapes perform the same function of cleaning optical sensors equally well.

**Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beeson ('865) and Gelardi ('843) in view of Kikuchi et al. (USPN 6353233)**

Beeson teaches that the first strip of material is closer to the front edge of the substrate sheet than the second strip of material. Beeson however fails to teach that the second strip is made from an open cell foam material comprising brush bristles. Kikuchi teaches a cleaning sheet comprising bristles (3a). First, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the second strip from an open-cell foam, since it has been held within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious engineering choice. *In re Leshin*, 125 USPQ 416. Additionally, it would have been obvious to modify the second strip of Beeson with an open-cell foam since it is an obvious modification well known in the art to duplicate parts for a multiple effect. *In re Harza*, 124 USPQ 378, 380. Having both strips be open-cell foam would only enhance the cleaning capabilities of Beeson's invention. In addition to modifying the material of the second strip, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the second strip so that it comprises

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bristles as taught by Kikuchi so that the bristles will aid in cleaning contaminants such as dust attached to the sensors (col. 4, lines 46-53).

**Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beeson ('865) and Gelardi ('843).**

Beeson teaches all the essential elements of the claimed invention however fails to teach that the substrate has approximately the planar dimensions of a number 10 envelope. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Beeson's substrate to have dimensions approximately equal to a number 10 envelope since the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device. A device having the claimed relative dimensions would not perform differently than the prior art device, and therefore, the claimed device is not patentable distinct from the prior art device. MPEP 2144.04. Additionally, Beeson states that the cleaning apparatus could take on various dimensions (col. 4, line 67).

**Claims 10, 13-14, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beeson ('865).**

Beeson teaches all the essential elements of the claimed invention including that the first strip is narrow to allow the first strip to vertically decompress when exiting the roller nip (claim 10). Beeson however fails to teach that the first strip height is approximately twelve times the substrate thickness, that the first strip height is 0.75 inches, the first strip has a width of 0.5 inches and that the first distance is 2.5 inches. It would have been obvious to modify Beeson's invention since the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device. A device having the claimed relative dimensions would not

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perform differently than the prior art device and therefore, the claimed device is not patentable distinct from the prior art device. MPEP 2144.

**Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beeson ('865) in view of Gelardi ('843).**

Beeson teaches all the essential elements of the claimed invention however fails to teach that the substrate comprises a semi-rigid vinyl material or an ABS material that is approximately 0.0625 inches thick. It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the substrate from a semi-rigid vinyl material or an ABS material, since it has been held within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious engineering choice. *In re Leshin*, 125 USPQ 416. Further, it would have been obvious to modify Beeson's substrate so that it is approximately 0.0625 inches thick since the only difference between the prior art and the claims is a recitation of relative dimensions of the claimed device. A device having the claimed relative dimensions would not perform differently than the prior art device and therefore, the claimed device is not patentable distinct from the prior art device. MPEP 2144.

**Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beeson ('865) and Gelardi ('843) in view of Kalbow (USPN 4055029).**

Beeson teaches all the essential elements of the claimed invention however fails to teach that the rectangular first strip has a top surface with a notch. Kalbow teaches an open-cell foam block comprising notches (12) in the top surface. It would have been obvious to one of skill in the art at the time the invention was made to modify the top surface of the first strip of Beeson

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with the notched top surface of Kalbow since the notches would allow the apparatus to clean more effectively (col. 1, lines 51-54). Additionally, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to notch a top surface of the first strip because Applicant has not disclosed that the notched surface provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the claimed notched surface or the top surface as taught by Beeson because both top surfaces perform the same function of cleaning equally well. Therefore, it would have been obvious to one of ordinary skill in the art to modify Beeson to obtain the invention as specified in claim 19.

**Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beeson ('865) in view of Gelardi ('843).**

Beeson teaches all the essential elements of the claimed invention however fails to teach that the rectangular first strip has a leading edge with an angled portion removed. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to remove an angled portion of the leading edge because Applicant has not disclosed that the angled edge provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with either the claimed angled edge or the edge as taught by Beeson because both leading edges perform the same function of cleaning equally well. Therefore, it would have been obvious to one of ordinary skill in the art to modify Beeson to obtain the invention as specified in claim 20. Additionally, regarding the shape of the cleaning strip, the court held that the shape or configuration of the claimed invention was a matter of choice, which a person of ordinary skill in



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the art would have found obvious absent persuasive evidence that the particular configuration or shape of the claimed strip was significant. *In re Dailey*, 149 USPQ 47.

**Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beeson (USPN 5589865) in view of Gelardi ('843) and Kurita (USPN 6529704).**

Beeson teaches all the essential elements of the claimed invention however fails to teach having a third, fourth and fifth strip of material on the substrate. Kurita teaches a toner removing sheet that comprises a plurality of strips (p) that are located on a substrate (s1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Beeson so that there are at least five strips of material on the substrate as taught by Kurita to ensure a better cleaning of the optical sensors. More strips means higher chance of removing all debris from the machine optics on the first run through.

**Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beeson (USPN 5589865) in view of Gelardi ('843).**

Beeson teaches all the essential elements of the claimed invention as stated above with regards to claim 1. Beeson however fails to teach that the first strip of material (36) comprises a lint-free, lead-free, non-abrasive, open-cell foam. Beeson's first strip of material (36) is an absorbent pad (implies open-cell) which has antistatic properties with low abrasive characteristics and is lint-free (col. 5, lines 21-24). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the first strip of material (36) of Beeson so that it is completely non-abrasive and lead-free as required by the claim since it has been held within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious engineering choice. *In re*

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*Leshin, 125 USPQ 416*. Further, using a material that is lead-free would help create a non-abrasive surface and would allow the cleaning pad to clean more efficiently. Additionally, it would have been obvious to modify the first strip of material so that is made from foam. The first strip of material is described in Beeson as an absorbent material and therefore making it from foam would not modify or alter the properties or function of the strip since foam is absorbent. Beeson further teaches using foam for the second strip of material (34; col. 5, lines 10-11)) and therefore since Beeson acknowledges the use of foam as a possible cleaning pad material, it would have been obvious to use an open cell foam for the first cleaning strip of material as well.

### ***Response to Arguments***

Applicant's arguments filed 1/4/10 have been fully considered but they are not persuasive.

The applicant argues that the rejection of old claim 5 (new claim 23) is not valid since Beeson does not teach the claimed elements and they are not inherent Beeson. In response, the examiner agrees with this statement and thus why an obvious type rejection was made. The board of appeals reversed the anticipatory rejection stating that Beeson does not teach the same material as claimed. Therefore, the anticipation rejection was withdrawn and an obvious rejection was made to modify Beeson so that it is completely non-abrasive and lead-free since one of skill in the art would select a material based on its suitability for the intended use. Using a lead-free material will help to create a completely non-abrasive surface and will allow the cleaning pad to clean more efficiently. Lastly, Beeson states that the first strip of material is an absorbent pad and modifying it so that it is a foam material would not alter the properties of

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function of the strip since the material as taught by Beeson for the first strip and the claimed foam are both absorbent materials. Further, the second strip of material is made of foam and since Beeson acknowledges the use of foam as a possible cleaning pad material, clearly using it for both strips would have been within the skill of one in the art.

Further, the applicant amended claim 1 to include new subject matter and therefore a further search was necessary.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shay L. Karls whose telephone number is 571-272-1268. The examiner can normally be reached on 6:30-5:00 M-Th.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Shay L Karls/  
Primary Examiner, Art Unit 3723